

CLAIMS

1. A wireless terminal device for (i) receiving a first radio signal relating to a first service which is a broadcasting service, 5 and a second radio signal relating to a second service, the first radio signal representing a plurality of time-division multiplexed programs as well as periods during which the respective programs are represented, and (ii) performing reproduction of one of the programs selected by a user, and predetermined processing based 10 on the second radio signal, the wireless terminal device comprising:

15 a tuner unit operable to generate a first baseband signal and a second baseband signal one at a time according to a switching signal, the first baseband signal being generated by frequency converting the received first radio signal and the second baseband signal being generated by frequency converting the received second radio signal;

20 a first baseband unit operable to demodulate the first baseband signal to a first data signal;

25 a second baseband unit operable to demodulate the second baseband signal to a second data signal; and

28 a switching unit operable to identify, with reference to the first data signal, a period during which the first radio signal representing the selected program is received, and control the tuner unit by outputting thereto the switching signal indicating a first period that includes the identified period, so that the tuner unit generates the first baseband signal during the first

period and the second baseband signal during a second period that is a period other than the first period, wherein

the wireless terminal device reproduces the selected program from the first data signal, and conducts the predetermined processing using the second data signal.

2. The wireless terminal device of Claim 1, wherein

the tuner unit includes a local oscillator operable to generate a local signal at (i) a first frequency during the first period for use in the generation of the first baseband signal and (ii) a second frequency during the second period for use in the generation of the second baseband signal, according to the switching signal, and

the tuner unit generates, using the local signal, the first and second baseband signals by frequency converting the first and second radio signals, respectively.

3. The wireless terminal device of Claim 2, wherein

the second service is a bidirectional communication service,

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the second baseband unit demodulates the second baseband signal to the second data signal, and modulates a third data signal to a third baseband signal, the third data signal being transmission data relating to the second service,

25 the wireless terminal device further comprising

a transmitting unit operable to generate a third radio signal by frequency converting the third baseband signal, and

transmit the third radio signal.

4. The wireless terminal device of Claim 3, wherein
the local oscillator generates the local signal at a third
5 frequency during a transmission period of the bidirectional
communication, and

the transmitting unit generates the third radio signal by
frequency converting the third baseband signal using the local
signal of the third frequency.

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5. The wireless terminal device of Claim 1, wherein
the tuner unit includes:

a first tuner operable to generate a first local signal
exclusively during the first period according to the switching
15 signal, and generate the first baseband signal by frequency
converting the first radio signal using the first local signal;
and

a second tuner operable to generate a second local signal
exclusively during the second period according to the switching
20 signal, and generate the second baseband signal by frequency
converting the second radio signal using the second local signal.

6. The wireless terminal device of Claim 5, further comprising
a power-saving unit operable to restrict or stop supply of
25 operating power to (i) the second tuner during the first period
and (ii) the first tuner during the second period, according to
the switching signal.

7. The wireless terminal device of Claim 1, further comprising
a power-saving unit operable to restrict or stop supply of
operating power or an operating clock signal to (i) the second
5 baseband unit during the first period, and (ii) the first baseband
unit during the second period, according to the switching signal.

8. The wireless terminal device of Claim 1, further comprising:
a first antenna having a selective gain to the first radio
10 signal, and operable to output a received signal to the tuner
unit; and
a second antenna having a selective gain to the second radio
signal, and operable to output a received signal to the tuner
unit, wherein
15 the tuner unit includes a switching subunit operable to select
one of the signal received by the first antenna during the first
period and the signal received by the second antenna during the
second period, according to the switching signal, and
the tuner unit generates the first baseband signal and the
20 second baseband signal both by frequency converting the signal
selected by the switching subunit.

9. The wireless terminal of Claim 1, wherein
the tuner unit includes a variable bandpass filter operable
25 to exclusively pass, according to the switching signal, the first
radio signal during the first period and the second radio signal
during the second period, out of a reception signal containing

the first and the second radio signals, wherein
the tuner unit generates the first baseband signal and the
second baseband signal both by frequency converting an output
signal of the variable bandpass filter.

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10. The wireless terminal of Claim 1, wherein

the first service is provided by a cellular system in which
each of a plurality of base stations provided for a geographic
cell transmits the respective first radio signal, and the second
radio signal contains positional information for measuring a
current position of a receiver device of the second radio signal,
and

the wireless terminal device periodically measures its own
current position based on the received second radio signal, and
15 when the measured current position moves from a first cell into
a second cell, the wireless terminal device stops receiving the
first radio signal transmitted from a base station of the first
cell and commences receiving the first radio signal transmitted
from a base station of the second cell.

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11. The wireless terminal device of Claim 1, wherein

the second radio signal contains positional information for
measuring a current position of a receiver device of the second
radio signal, and

25 the wireless terminal device periodically measures its own
current position based on the received second radio signal to
calculate a moving speed, and receives the first radio signal

in one of a plurality of different operating modes that corresponds to the calculated moving speed.

12. The wireless terminal device of Claim 1 displays information relating to the predetermined processing according the second radio program, on a display along with the selected program.

13. The wireless terminal device of Claim 1, wherein the first service is Digital Video Broadcasting or Digital 10 Audio Broadcasting in Europe.

14. The wireless terminal device of Claim 1, wherein the second service is a wireless Local Area Network, a mobile phone, a Global Positioning System, or remote control of a device.

15. A single-chip IC or an IC chip set for use in a wireless terminal device, the wireless terminal device (i) receiving a first radio signal relating to a first service which is a broadcasting service, and a second radio signal relating to a second service, the first 20 radio signal representing a plurality of time-division multiplexed programs as well as periods during which the respective programs are represented, and (ii) performing reproduction of one of the programs selected by a user, and predetermined processing based on the second radio signal, the single-chip IC or the IC chip 25 set comprising:

a reception signal obtaining terminal operable to obtain the first and second radio signals received;

5 a tuner circuit operable to generate a first baseband signal and a second baseband signal one at a time according to a switching signal, the first baseband signal being generated by frequency converting the obtained first radio signal and the second baseband signal being generated by frequency converting the obtained second radio signal;

10 a first baseband circuit operable to demodulate the first baseband signal to a first data signal;

15 a second baseband circuit operable to demodulate the second baseband signal to a second data signal;

20 a program selection signal obtaining terminal operable to obtain a signal indicating the selected program;

25 a switching circuit operable to identify, with reference to the first data signal, a period during which the first radio signal representing the selected program is received, and control the tuner circuit by outputting thereto the switching signal indicating a first period that includes the identified period, so that the tuner circuit generates the first baseband signal during the first period and the second baseband signal during a second period that is a period other than the first period; and

30 an output terminal operable to output the first and second data signals.

35 16. The single-chip IC or the IC chip set of Claim 15, wherein the tuner circuit includes a local oscillator operable to generate a local signal at (i) a first frequency during the

first period for use in the generation of the first baseband signal and (ii) a second frequency during the second period for use in the generation of the second baseband signal, according to the switching signal, and

5 the tuner circuit generates, using the local signal, the first and second baseband signals by frequency converting the first and second radio signals, respectively.

17. The single-chip IC or the IC chip set of Claim 15, wherein
10 the tuner circuit includes:

 a first tuner operable to generate a first local signal exclusively during the first period according to the switching signal, and generate the first baseband signal by frequency converting the first radio signal using the first local signal;
15 and

 a second tuner operable to generate a second local signal exclusively during the second period according to the switching signal, and generate the second baseband signal by frequency converting the second radio signal using the second local signal.

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